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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,423	02/07/2002	William M. Shvodian	207218US8	7852
22850	7590	11/29/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.			TRAN, PHUC H	
1940 DUKE STREET			ART UNIT	
ALEXANDRIA, VA 22314			PAPER NUMBER	
			2668	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,423

Applicant(s)

SHVODIAN, WILLIAM M.

Examiner

PHUC H. TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/25/02</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 4-19 and 33-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Gubbi (U.S. Patent No. 6934752 B1).

- With respect to claims 4,9,14,18,33 and 36, a wireless network comprising:

a coordinator (13 in Fig. 1); and a least two piconet (col. 13, lines 10-20; col. 25, lines 17-22);

a plurality of devices configured to share bandwidth according to a protocol (e.g. blocks 16 in Fig. 1), wherein the protocol includes a beacon period for transmitting coordination information from the coordinator to the plurality of devices (e.g. block 53 in Fig. 3),

a contention free period following the beacon period for providing an exclusive guaranteed time slot to each of the plurality of devices to transmit data such that only one of the plurality of devices is transmitting at any one time (block 57 in Fig. 3 e.g. time reserved for subnet's tx), and

a shared time period following the beacon period used as at least one of a slot cycle time division multiple access period managed by the coordinator for additional transmissions by the plurality of devices (e.g. contention period 58 in Fig. 3), a polling period managed by the coordinator for additional transmissions by the plurality of devices (col. 5, lines 9-11), and a reservation period for reserving time by the plurality of devices in a subsequent frame (block 208 in Fig. 19),

wherein each exclusive guaranteed time slot has a respective predetermined duration (col. 3, lines 18-24), and the plurality of devices are sleeping when not receiving the beacon and not transmitting data such that the plurality of devices are not receiving data and not transmitting data while sleeping (col. 41, lines 55-57).

- With respect to claims 5,10, and 40, wherein the shared time period follows the contention free period (Fig. 3).

- With respect to claims 6,11, and 41, wherein the contention free period follows the shared time period (Fig. 3).

- With respect to claims 7,12,15, and 42, wherein the reservation period comprises at least one of a random access reservation slot period and an assigned reservation slot period (e.g. the contention free period and contention period for random and assigned reservation slot).

- With respect to claims 8,13,17,19,35, and 37, wherein the wireless networks comprises at least one of a wireless personal area network and a wireless local area network (e.g. WLAN in Fig. 1).

- With respect to claim 16, wherein the reservation period comprises an exclusive assigned reservation slot for each of the plurality of devices such that each of the plurality of devices optionally transmits a reservation request message during a corresponding exclusive assigned reservation slot (e.g. Fig. 19).

- With respect to claim 34, wherein: each of the plurality of devices sends a request to send message to the controller and receives a clear to send message from the controller prior to transmitting data in their respective exclusive variable time slot (col. 15, table 1).

- With respect to claim 38, wherein: the protocol further includes an optional contention access period following the beacon period for each of the at least one device of each of the at least two piconets to optionally transmit a control message to the coordinator and for the coordinator to transmit a control response to the control message (e.g. contention period for each device to transmit message to coordinator e.g. Fig. 3).

- With respect to claim 39, wherein: the protocol further includes a shared time period (e.g. contention period) following the beacon period used as at least one of a slot cycle time

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division multiple access period managed by the coordinator for additional transmissions by the at least one device, a polling period managed by the coordinator for additional transmissions by the at least one device (col. 5, lines 9-11), and a reservation period for reserving time by the at least one device in a subsequent frame (block 208 in Fig. 19), wherein the unused portion for a first of the at least two piconets is further coordinated to coincide with the shared time period for a second of the at least two piconets (col. 18, lines 16-35).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, and 20-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haartsen et al. (U.S. Patent No. 6870857 B1) in view of Bauchot et al. (U.S. Patent No. 6141336).

- With respect to claims 1,3,20,24,26,28,29, and 31, Haartsen teaches a method for sharing bandwidth by a plurality of devices in at least one of a wireless personal area network and a local area network, comprising the steps of:

sending from a coordinator a beacon including coordination information to each of the plurality of devices (col. 10, lines 6-8), the beacon including for each of the plurality of devices a device-unique start time indicator corresponding to an exclusive guaranteed time slot for a

preselected device of the plurality of devices to transmit data, a transmission duration corresponding to a duration of the exclusive guaranteed time slot (col. 10, lines 10-20), and

a shared time slot start time indicator corresponding to a shared time slot separate from the exclusive guaranteed time slots and shared by the plurality of devices (e.g. TDMA in col. 1, lines 52-53);

receiving the beacon by the plurality of devices (col. 10, lines 9-10);

storing the device-unique start time indicator and the transmission duration in a memory of each preselected device (col. 5, lines 55-65);

sleeping after the storing step such that the plurality of devices are not receiving data and not transmitting data while sleeping (col. 7, lines 50-53);

transmitting, by each of the plurality of devices, at respective times corresponding to the device-unique start time stored in the memory of each preselected device and for the transmission duration stored in the memory of the preselected device (col. 10, lines 20-24);

returning to sleep, after the transmitting step such that the plurality of devices are not receiving data and are not transmitting data while sleeping (col. 5, lines 33-34); and

waking up at a predetermined time such that another beacon can be received by the plurality of devices (col. 5, lines 28-33),

wherein each device-unique start time and each transmission duration is set so that only one of the plurality of devices is transmitting at any one time during a period of time including each of the exclusive guaranteed time slots (e.g. Fig. 6 shows the timeslot for each device to response to the master), and

the shared time slot is used as at least one of a slot cycle time division multiple access period managed by the coordinator for additional transmissions by the plurality of devices (e.g. TDMA in col. 1, lines 40-46), a polling period managed by the coordinator for additional transmissions by the plurality of devices (col. 1, lines 54-56). Haartsen fails to teach a reservation period for reserving time by the plurality of devices in a subsequent guaranteed time slot. Bauchot teaches the reservation period for reserving time by the plurality of devices (col. 2, lines 38-46) for providing a quality of service in the communication. The reservation period can be implemented into communication of wireless master and wireless slave units to provide a QoS. Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to implement the method of reservation for providing the service between wireless slave and master units in wireless communication.

- With respect to claim 2, wherein the transmitting step further comprises:
waking up by another of the plurality of devices (col. 5, lines 28-33);
receiving, by the another of the plurality of devices, data transmitted during the transmission duration (col. 10, lines 9-10); and

returning to sleep, after the receiving step such that the another of the plurality of devices is not receiving data and not transmitting data while sleeping (col. 5, lines 33-34), wherein the beacon further includes a receive indicator corresponding to another exclusive guaranteed time slot during which the another of the plurality of devices is to receive the data transmitted (e.g. Fig. 6 shows the timeslot for each device to response to the master).

- With respect to claim 21, wherein: the pluralities of devices are further configured to store the device-unique start time indicator and the transmission duration in a memory of the preselected device (col. 5, lines 55-65).

- With respect to claim 22, wherein: the plurality of devices are further configured to wake up at a predetermined time such that another beacon can be received (col. 5, lines 28-33).

- With respect to claims 23,25,27,30, and 32, wherein the wireless networks comprises at least one of a wireless personal area network and a wireless local area network (e.g. piconet teaches in col. 1, line 36).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Ho et al. (US 2002/0071449 A1) discloses unified channel access for supporting quality of service (QoS) in a local area Network.
- Romans et al. (U.S. Patent No. 6587 453 B1) discloses method of communicating first and second data types.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUC H. TRAN whose telephone number is (571) 272-3172. The examiner can normally be reached on M-F (8-4:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on (571) 272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phuc Tran
Assistant Examiner
Art Unit 2664

P.t
11/22/05


CHIEH M. FAN
SUPERVISORY PATENT EXAMINER